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ENFOR Project P-247

Trial Conversion of Conventional Inventory Data to Biomass Data in Nova Scotia

by

G.D. MacQuarrie

Canada

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ENFOR Project P-247

Trial Conversion of Conventional Inventory Data to Biomass Data in Nova Scotia

by

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March 1983

ABSTRACT

Single tree equations are available for estimating the biomass components for some species in the Maritimes. This pilot study has developed techniques to demonstrate two methods to estimate regional biomass inventory using conventional forest inventory data available in Nova Scotia. Measurements from permanent sample plots and from multi stage temporary sample plots are transformed using the available biomass equations. Actual results for two counties are provided and details of missing data are discussed.

FOREWORD

ENFOR is the bilingual acronym for the Canadian Forestry Service's ENergy from FORest (ENergie de La FORêt) program of research and development aimed at securing the knowledge and technical competence to facilitate in the medium to long term a greatly increased contribution from forest biomass to our nation's primary energy production. This program is part of a much larger federal government initiative to promote the development and use of renewable energy as a means of reducing our dependence on petroleum and other non-renewable energy sources.

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Introduction

Under two previous ENFOR projects, P4 and P38 (KER 1980, KER 1980), biomass equations for the following species in the Maritimes have been developed; balsam fir, white spruce, black/red spruce, jack pine, red maple, white birch, aspen, grey birch, white pine, hemlock, cedar, sugar maple, yellow birch, ash and beech. These equations were developed as standard equations using both diameter and height as independent variables, although for some components, like crown weight, height was not a significant variable. These equations were developed from sample specimens taken from two rather restricted geographical locations and ENFOR project P-159 was subsequently proposed to overcome the possible geographical constraints of these equations. Rather than wait for the results of P-159 due in 1983, this study has used the available set of equations to conduct a test of techniques and methodologies necessary to convert the present forest inventories of Nova Scotia to Biomass inventories. (Any full-scale conversion that may be done by the province at a later date would use the regional (P-159) biomass equations).

The major objectives of this study are:

(1) To develop techniques and demonstrate the conversion of conventional forest inventory data to biomass inventory data for selected forest types in Nova Scotia.

(2) To estimate costs and time required to implement the method and technique developed in (1) to province-wide conversion (when regional biomass equations become available), and to detail "missing data" within the present forest inventory necessary for a total biomass inventory.

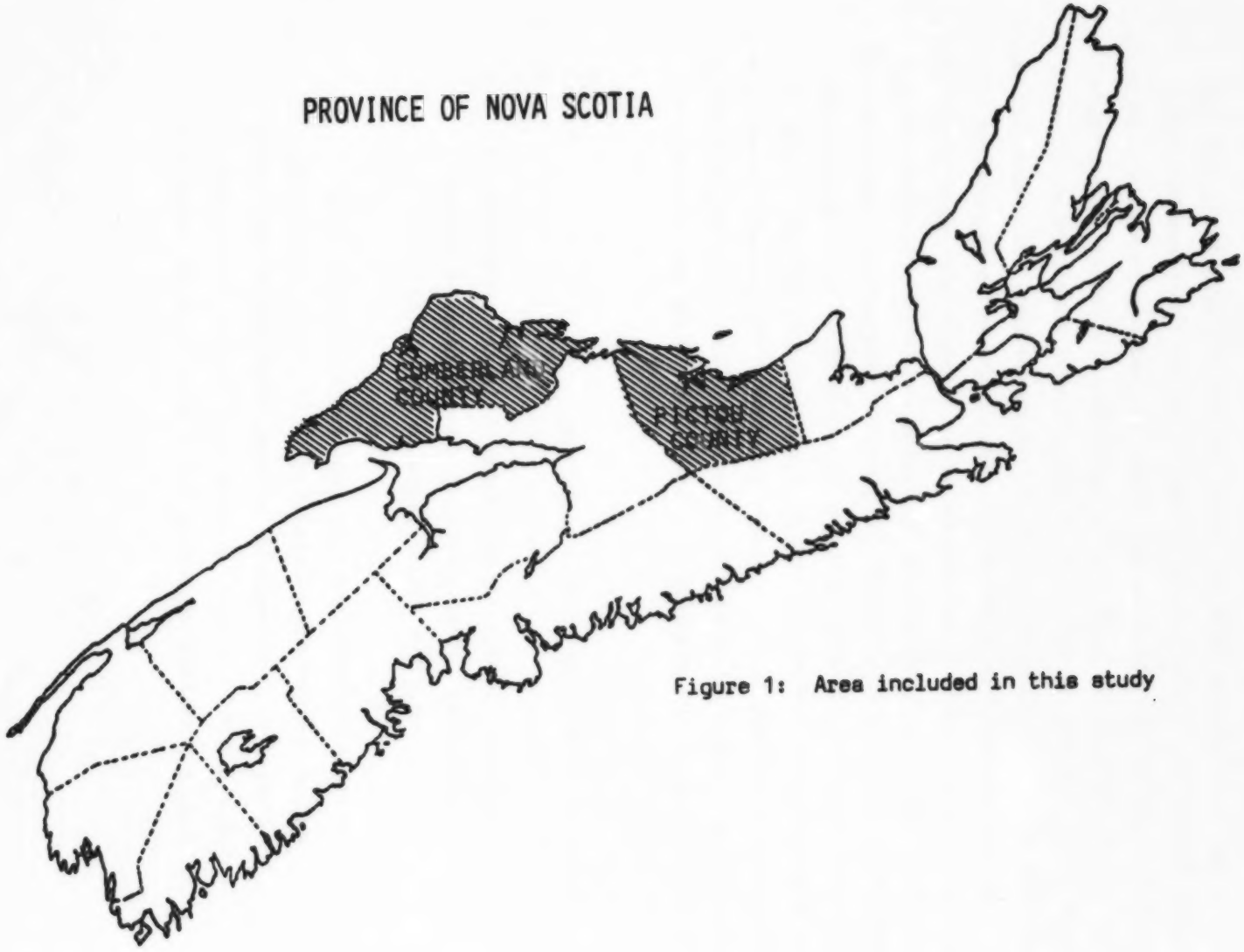


Figure 1: Area included in this study

1.0 Methods

1.1 Biomass Components

The following biomass components have been considered:

Total Bole, Wood
Total Bole, Bark
Total Bole

Unmerchantable Bole, Wood
Unmerchantable Bole, Bark
Total Unmerchantable Bole

Merchantable Bole, Wood
Merchantable Bole, Bark
Total Merchantable Bole

Stump, Wood (above ground)
Stump, Bark (above ground)
Dead Branches

Live Branches
Foliage
Total Live Crown

Total Above Ground

Mass estimates are available on both an oven-dry and fresh weight basis. Estimates of individual tree biomass are to be made from equations provided in Ker (4, 5). Equations for estimating biomass of unmerchantable stem wood and bark, stump wood and bark and dead branches have not yet been developed. Likewise, functions for predicting the mass on a fresh weight basis for branches or foliage are not available.

No inventory estimates for these components are provided in this study although the procedures used will accept them should they become

available. A separate function is provided for estimating total above ground mass. This estimate is not necessarily equal to the sum of individual component estimates.

The following species groups have been considered:

White Spruce
Red/Black Spruce
Balsam Fir
Hemlock
White Pine
Red Pine
Larch
Jack Pine
Other Softwoods (Scotch Pine, W. Cedar)

Sugar Maple
Red Maple
Yellow Birch
White Birch
Oak
Aspen
Beech
Grey Birch
White/Black Ash
Other Hardwood (B. Cherry, Elm, Balsam Poplar)

Biomass equations were not provided for all species found in Nova Scotia and the following substitutions are necessary:

Species Substitutions:

Species	Equation Used
Red Spruce	Black Spruce
Scotch Pine	Red Pine
Oak	Sugar Maple
Black Ash	White Ash

Species Substitutions:...cont'd

Species	Equation Used
Black Cherry	Yellow Birch
Elm	Sugar Maple
Balsam Poplar	Aspen
Other Hardwood	Beech

1.2 Estimation from Permanent Sample Plot Data

(a) The Data Base

In 1965, with the start of the continuing forest inventory, a system of measuring periodic annual increment was initiated. Between 1965 - 1970 inclusive, 1,765 permanent sample plots were established all over Nova Scotia and these were to be remeasured every five years. One hundred fifty of these plots are located in Cumberland County and 86 plots are located in Pictou County.

Each plot was classified according to the following criteria:

Subdivision
County
Municipality
Cover - Softwood, Mixedwood, Hardwood
Density Class - up to 40%, 41 - 60%, 61 - 80%, 81 - 100%, Overstocked
Height Class - up to 15', 16 - 30', 31 - 50', 51'+
Site Quality - I, II, III, IV, V, VI
Age Class - up to 20 years, 21 - 40 years, 41 - 60 years,
61 - 80 years, 81 - 100 years, 101 + years, Uneven aged
Aspect - Northeast quadrant, Southeast quadrant, Southwest quadrant,
Northwest quadrant
Elevation - 200' classes
Ownership - Crown, Large Private, Small Private, Federal
Eco Regions - Site Districts as defined by O. Loucks

The plots were randomly distributed over the whole province. The plots were 0.1 acres in size and circular. All trees 3.6 in DBH and larger were numbered with paint and metal tags and DBH point marked with paint. A metal stake was established at the centre. The species, DBH to 0.1", total and merchantable height, stump height, top merchantable diameter, tree condition, crown class and tree status were measured on each tree.

The number of trees in 2 and 3" DBH classes were recorded by DBH class and species.

In 1975 the second remeasurement was started. At this time the plots were converted to metric (SI) units and site quality classes changed to forest capability ratings.

Definitions

There are a number of terms that need defining:

Softwood Cover - Stand containing more than 75% of merchantable volume in softwood species

Mixedwood Cover - Stand containing 75 - 25% of merchantable volume in softwood species

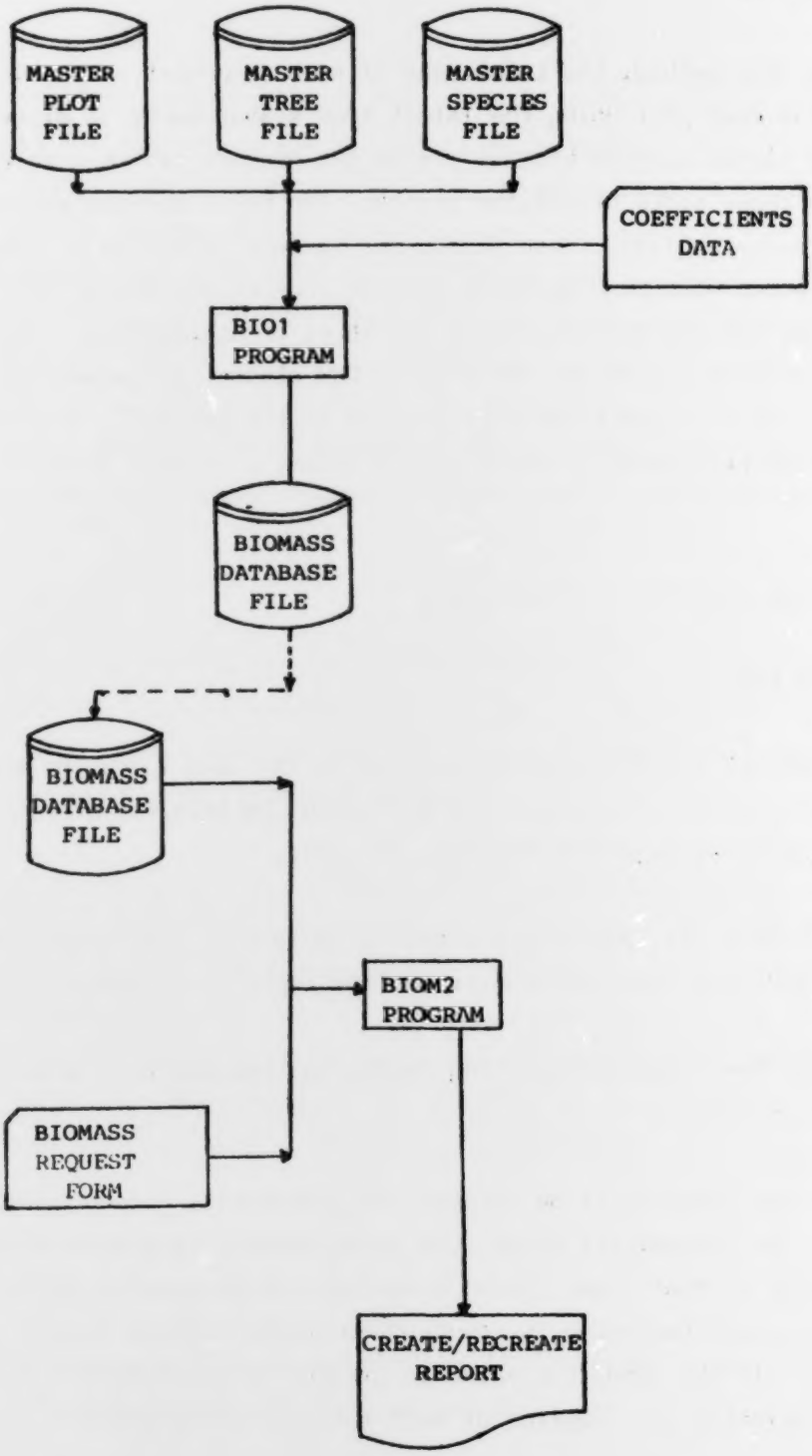
Hardwood Cover - Stand containing less than 25% of merchantable volume in softwood species

Crownland - Land owned by Province of Nova Scotia

Large Owners - Those owning 1,000 acres or more

Small Owners - Those owning less than 1,000 acres

Figure 2: PSP System Data Flow Diagram



(b) Compilations

Using this method, the total mass of each component by species was calculated for each plot using the latest tree measurements of diameter and height. The simple average biomass yields per hectare can then be estimated by combining those plots of similar strata. The total biomass inventory is then estimated by applying these yields per hectare to the known area of each strata which have been obtained from an independent survey (1). A search routine was written to provide any level of aggregation. The mass from trees in the 4 - 8 cm DBH and 10 + cm DBH classes are presented separately. Fig. 2 shows the flow chart for this portion of the project. A technical report of these procedures is contained in Volume 3 of this study (6).

1.3 Estimation from MSS Inventory Data

(a) The Data Base

The present forest inventory started in 1965 and is now on the third cycle of the continuing program. The aim is to complete the province every 10 years doing an average of 2 counties per year.

The first cycle 1965 - 71 and second cycle 1972 - 80 used a strip cruise method. In 1976 the inventory converted from Imperial to metric units.

In 1980 the inventory sampling system was changed to a Multi-Stage 3P Sampling design, (MSS).

Three Pee Sampling is an acroymn for Probability Proportional to Prediction. The probability of an item being sampled is proportional to a predicted value of that item. In an inventory, it is usually volume or tree height. This predicted value is compared to random numbers from a random number table. If the predicted value is greater or equal to the random number, the item is selected for sampling or more detailed measurement.

The Provincial Inventory has three stages:

Stage 1

The stand at the centre of each photo in the county is delineated and classified by (a) ownership: Crown, (lease or unleased), Large Private (pulp & paper, lumber companies owning 4000 ha, lumber companies owning less than 400 ha and individual owners owning more than 400 ha), Small Private (those owning less than 400 ha); (b) Cover Type - softwood, mixedwood, hardwood; (c) Maturity class - regeneration, young, immature, pole, mature, overmature as well as species composition, height class, basal area class, capability class, age class, volume per hectare class, crown closure class, slope class, operability class, aspect and biophysical eco regions. The nonforested photo centres are also classified into a number of catagories.

Stage 2

The cruiser locates the stands selected from Stage 1 and proceeds with point sampling at the sample locations. The number of sample points depend on stand area. The point sample is done with a basal area factor 3 m^2/ha. This gives an average 8 - 10 trees per point.

On each qualifying tree the cruiser estimates the tree height. This estimated height is compared to appropriate random numbers. If the estimate is greater than or equal to the random number the tree is selected for measurement with a dendrometer. Trees down to 2 cm DBH class are eligible for selection. Each tree is also classed by 2 cm DBH class, healthy or low vigor or sapling and species. An example of the diameter class boundaries is given by 4 cm class = 3.1 cm to 5.0 cm. The stand is also catagorized as a sawlog or pulpwood stand.

Stage 3

The third stage involves measurement of the selected trees with a dendrometer. A Barr and Stroud FP 15 dendrometer is used.

The dendrometer crew classified each dendrometer tree by product (a) sawlog, (b) undersized sawlog, (c) boltwood, (d) pulpwood, (e) sapling,

(f) cull tree. The products can be graded as Sawlog 1, 2 or 3, sawlog top, pulpwood top, cull sections, shortwood, topwood. All merchantable forks on dendrometer trees are also measured.

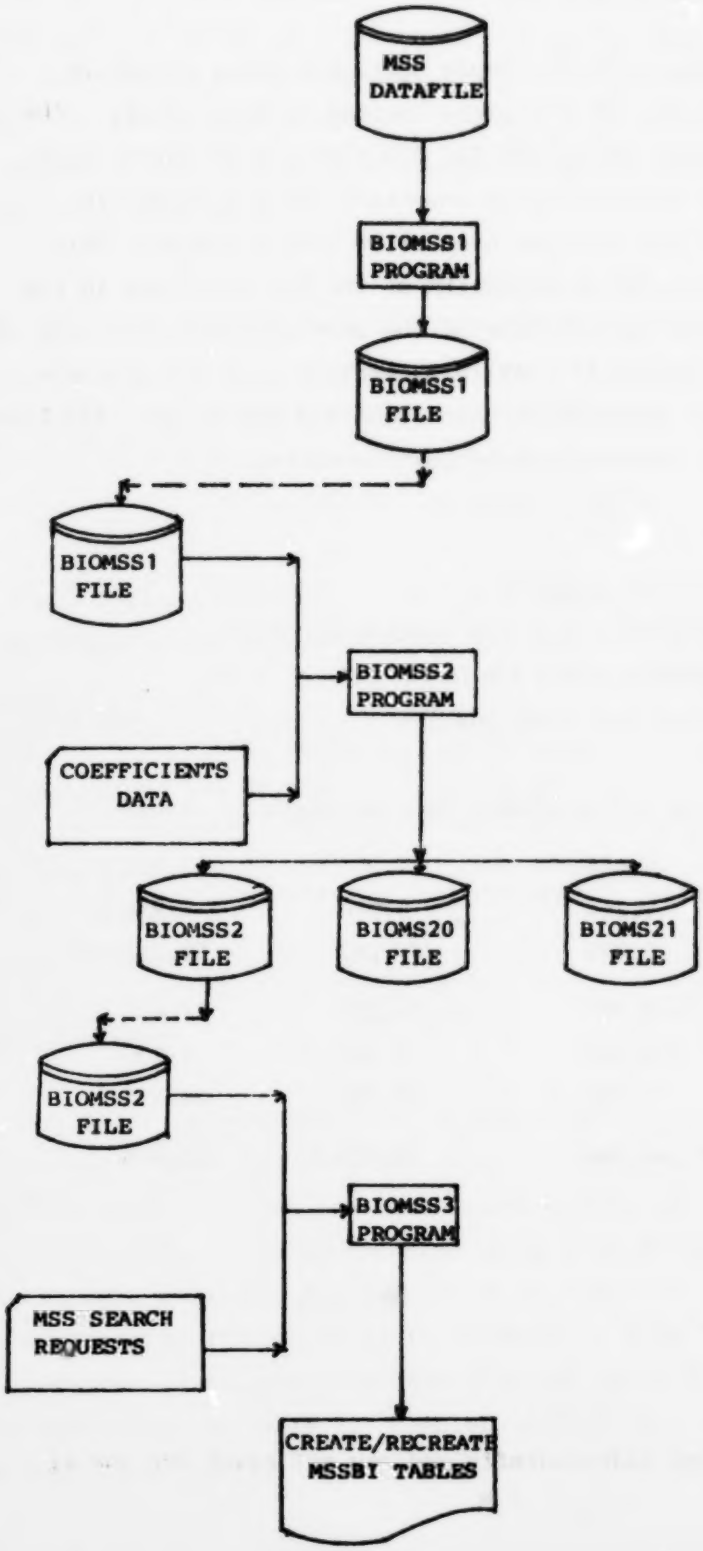
The dendrometer trees are also measured for age class, 5 year radial growth and bark thickness.

The dendrometry data provides the volume and product classification. This data is combined with the rest of the point sample and first stage data to produce a table of volumes by species, DBH class, product and grade, by county, ownership, cover type, maturity class andstand type. Wellings and Barron (8) provide details for the sampling scheme.

(b) Compilations

Compilation of the field data is by Grosenbaugh's (3) STX procedures. This program provides for punched card output giving the estimated total tree frequency by diameter class, species and stratum. These estimates formed the basis of this portion of the project. For each species and diameter class, the mass of each component is calculated for a tree at the class mid point using the diameter-only form of the biomass equations. The total inventory estimate is obtained by multiplying the per tree values by the estimated total number of trees in each diameter class. The estimates for each individual strata is therefore weighted by the expected diameter distribution. A search routine was written to provide any level of aggretion. Fig. 3 shows the Flow Chart for this portion of the project. A technical report of these procedures is contained in volume 4 of this study (7).

Figure 3: MSS System Data Flow Diagram



2.0 Results and Discussion

2.1 Permanent Sample Plot Estimate

Table 1 gives a summary of the simple average biomass yields in Cumberland County based on the 150 PSP plots located in this county. The 1976 inventory of this county identified 322 300 hectares of forest land. Therefore, the total above ground biomass inventory for the county is (82.644 t/ha • 322 300 ha) 26.6 million oven dried metric tonnes. This estimate is weighted only by the distribution of the PSP locations in the county which although random may not provide the best available estimate of cover type distribution. Tables A1 - A9 in Appendix A give the complete details of this county wide estimate in both fresh and dry units. Additional estimates by ownership and cover type have been conducted.

TABLE 1
PSP AVERAGE BIOMASS YIELD FOR CUMBERLAND COUNTY
BY DIAMETER CLASS AND COMPONENT
t/ha (Dry) All Species

	4 - 8 cm class	10 + cm class	Total
Total Stem Wood	6.687	41.303	47.990
Total Stem Bark	1.264	5.946	7.210
Total Stem*	7.979	47.247	55.226
Live Branches	2.397	15.283	17.680
Foliage	1.372	5.761	7.133
Total Live Crown*	3.778	20.900	24.678
Total Above Ground*	12.166	70.498	82.664

* *Total values are estimated independently and may not equal the sum of components.*

Table 2 provides these yields by stratum, the number of PSP plots and the total stratum area estimated by the continuous forest inventory (1). The total above ground biomass for the county on an area weighted basis is 27.1 million oven dried metric tonnes. It can be seen however, that segregating the sample leaves some stratum with a low number of PSP samples. The original PSP sample design was not intended to provide high precision at these levels of regional stratification. Complete tables have been provided as Volume 2 of this study.

TABLE 2

PSP TOTAL ABOVE GROUND BIOMASS YIELD FOR

CUMBERLAND COUNTY

BY OWNERSHIP AND COVER TYPE

t/ha (dry), All Species

(# of plots/area in ha)

	Ownership			
Cover Type	Crown	Large Private	Small Private	Total
Softwood	75.459 (12/24 300)	84.133 (22/57 600)	81.450 (49/70 000)	81.295 (83/152 200)
Mixedwood	49.863 (6/13 800)	116.184 (9/33 400)	81.729 (20/59 100)	85.125 (35/107 100)
Hardwood	81.309 (5/7 400)	104.000 (9/21 700)	73.413 (17/33 100)	83.519 (32/62 900)
All	70.054 (23/45 600)	95.814 (40/112 800)	79.927 (86/162 300)	82.664 (150/322 300)

2.2 MSS Estimates

The total biomass inventory is estimated directly from the MSS data using the total tree frequency estimates. Therefore, the values obtained at any level of aggregation can be considered fully weighted. Pictou County is the first county to be inventoried using this method. Table 3 gives the summary biomass inventory for this county. Table B1 - B5 in Appendix B give the completed details for this estimate in both fresh and dry weight units. Additional estimates by ownership and cover type have been conducted and are summarized in Table 4. Complete tables have been provided as Volume 2 of this study.

TABLE 3

MSS BIOMASS INVENTORY FOR PICTOU COUNTY

BY DIAMETER CLASS AND COMPONENT

Thousands of Tonnes (dry), All Species

	2 - 8 cm class	10 + cm class	Total
Total Stem Wood	743.0	9 624.0	10 367.0
Total Stem Bark	136.1	1 392.3	1 528.4
Total Stem*	882.9	11 004.0	11 887.0
Live Branches	273.5	2 575.1	2 848.6
Foliage	165.7	1 010.4	1 176.1
Total Live Crown*	440.4	3 583.6	4 024.0
Total Above Ground*	1 361.7	14 724.0	16 085.7

TABLE 4

MSS TOTAL BIOMASS INVENTORY FOR PICTOU COUNTY

BY OWNERSHIP AND COVER TYPE

Thousands of Tonnes (dry), All Species

Cover Type	Crown	Large Private	Small Private	Total
Softwood	1 024.1	656.2	4 177.1	5 857.4
Mixedwood	515.6	445.3	3 406.9	4 347.8
Hardwood	803.6	934.2	4 142.7	5 880.6
All	2 323.4	2 035.7	11 726.5	16 085.7

*Total values are estimated independently and may not equal the sum of components.

2.3 MSS vs. PSP

To compare the two methods, an unweighted PSP inventory estimate has also been completed for Pictou County. The results are given in Table 5. The total and 10 + cm DBH component compare very favourable. The sapling estimates differ by almost 50%. In the MSS sampling scheme regeneration and young aged stands are not eligible for field sampling in the second and third stages. These stands have little or no merchantable volume which the stages are designed to estimate. The stands do support a certain amount of biomass but this will remain unsampled in the MSS method. The sapling mass shown in Table 5 represents the sapling and understory portion of immature, pole and mature - overmature stands. Sampling by the two systems is not completely comparable for this portion of the stand. The MSS system measures all stems 2 cm or greater, while the PSP system measures those stems 4 cm or greater.

TABLE 5
PICTOU COUNTY
BIOMASS INVENTORY COMPARISON
(tonnes)

		M.S.S.*	P.S.P.	% Diff.
Sapling	Dry	1 361 700	2 676 400	+ 49.2
10 +	Dry	14 724 000	15 280 040	+ 3.6
Total	Dry	16 085 700	17 956 440	+ 10.5
Sapling	Fresh	2 746 000	5 219 730	+ 47.4
10 +	Fresh	28 647 000	30 023 360	+ 4.6
Total	Fresh	31 393 000	35 243 090	+ 10.1

Only Immature, Pole, Mature - Overmature sampled

2.4 Missing Data

A number of areas have already been mentioned where the information necessary to provide a complete biomass inventory is not available.

Equations for providing estimates for seven biomass components on a fresh or dry basis and for two components on a fresh basis are not available. No equations are available for seven species recognized by the Nova Scotia inventory system. These missing functions have been specified in section 1.1.

The functions that were available for this project provide for 204 individual species-component estimates. Diameter only forms of the functions are available for all estimates. Functions with both diameter and height as independent variables are available for 136 of the estimates. Other two-variable functions using crown width, crown volumes, live crown length cannot be used in Nova Scotia since no estimates of these variables are collected by either the PSP or MSS inventory systems. It may be possible to estimate such values from stand estimates of crown closure or stocking but this has not been investigated here.

As mentioned in section 1.3 only the single variable function has been used in the MSS method as height estimates are not normally available. Grosenbaugh's STX procedures can provide for direct estimation of biomass values from the MSS inventory by incorporating conversion coefficients. However, these coefficients must be specified by a multivariate regression having the form:

$$W = a_1 \cdot V + a_2 \cdot S + a_3 \cdot L$$

Where W = weight of biomass

V = stem volume

S = stem surface area

L = stem length

a_1, a_2, a_3 = regression coefficients

Grosenbaugh's method of estimating V - S - L have been given elsewhere (2). To obtain the necessary coefficients it would be necessary to estimate the V - S - L for each of Kerr's biomass sample trees and fit a new regression to the data using these new independent variables. The choice of this three variable form over the diameter only form of regression would depend on their relative precisions.

As mentioned in section 2.3 the MSS sampling system will not provide estimates of biomass in regeneration or young aged stands. Substitute estimates for these areas could be provided from the PSP method. Average biomass yields per hectare for the missing stand types in each ownership would be estimated from the available PSP samples and combined with the area estimates provided by the MSS inventory.

For Pictou county the PSP method indicates biomass yields of 12.1 and 68.3 tonnes per hectare (dry weight) for stands 0 - 20 and 21 - 40 years old. These are based on a sample size of 13 and 12 plots even though all ownerships were combined. Total inventory using areas of 27 900 ha of regeneration and 26 200 ha of young stands have been added to the MSS estimate and compared to the PSP estimate in table 6. The percentage difference has been reduced compared to those in table 5.

TABLE 6

PICTOU COUNTY

CORRECTED BIOMASS INVENTORY COMPARISON

(tonnes)

	MSS/PSP	PSP	% Diff.
Sapling Dry	2 040 334	2 676 400	+ 23.8
10 + Dry	16 173 781	15 280 040	- 5.8
Total Dry	18 214 115	17 956 440	- 1.4
Sapling Fresh	4 075 915	5 219 730	+ 21.9
10 + Fresh	31 590 432	30 023 360	- 5.2
Total Fresh	35 666 347	35 243 090	- 1.2

2.5 Data Availability

The PSP method can be used immediately to provide biomass inventory estimates for the entire province. Weighted estimates are desirable but this method may encounter sample size problems. There is a real risk that even with the simple three way stratification (county, owner, cover) used here, some unsampled strata may be found when applied to the entire province.

The MSS method provides a large sample base which can be disaggregated to a significant degree at the county level. Only four counties have been inventoried with this method. At an average completion rate of two counties per year, provincial coverage will not be available until 1990.

REFERENCES

1 - Anon. 1978. Information Report Nova Scotia Forest Inventory North Central Subdivision (Cumberland and Colchester Counties) 1976. N.S. Department of Lands and Forests.

2 - Grosenbaugh, L.R., 1966. Tree Form: Definitions, Interpolation, Extrapolation. Forestry Chronicle, p. 444-457.

3 - Grosenbaugh, L.R., 1974. STX 3-3-73: Tree Content and Value Estimation Using Various Sample Designs, Dendrometry Methods and V-S-L Conversion Coefficients. U.S.D.A. Forest Service Research Paper SE-117.

4 - Ker, M.F., 1980. Tree Biomass Equations for Seven Species in Southwestern New Brunswick. Maritimes Forest Research Centre, M-X-114.

5 - Ker, M.F., 1980. Tree Biomass Equations for Ten Major Species in Cumberland County, Nova Scotia. Maritimes Forest Research Centre, M-X-108.

6 - Majaess, F.G., 1982. The PSP Biomass Project Report. Nova Scotia Department of Lands and Forests, Biomass Inventory for Nova Scotia: A Pilot Study, Vol. 3.

7 - Majaess, F.G., 1982. The MSS Biomass Project Report. Nova Scotia Department of Lands and Forests, Biomass Inventory for Nova Scotia: A Pilot Study, Vol. 4.

8 - Wellings, F.R. and Barron, B., 1981. Nova Scotia Department of Lands and Forests Provincial Forest Resources Inventory Field Specifications

APPENDIX A

P.S.P. Estimates

Cumberland County

TABLE A1

RUN DATE 02/08/19-

PERMANENT SAMPLE PLOT
SEARCH ON

REQUEST NUMBER 1

SUBDIVISION	2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
COUNTY	1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MUNICIPALITY	1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
FOREST CLASS		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
COVER		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DENSITY		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
HEIGHT		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
SITE		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
AGE		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ASPECT		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DRAINAGE		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ELEVATION		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
TYPE CUT		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
AGE CUT		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
OWNERSHIP		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
** LAND SYSTEM **																					
REGION		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DISTRICT		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
SYSTEM		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ECO REGION		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
** REGENERATION **																					
AMOUNT		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DOMINANCE		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
HEIGHT		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
PLOT		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

TABLE A2

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

TREES 3 - 9 CM DBH
KG/HA (DRY) - PART I

SPECIES	TOTAL STEM WOOD	TOTAL STEM BARK	TOTAL STEM TOTAL	UNMERCHNTBLE STEM WOOD	UNMERCHNTBLE STEM BARK	UNMERCHNTBLE STEM TOTAL	MERCHNTBLE STEM WOOD	MERCHNTBLE STEM BARK	MERCHNTBLE STEM TOTAL
WHITE SPRUCE	.10898E+03	.19353E+02	.12911E+03	0.	0.	0.	.10898E+03	.19353E+02	.12911E+03
SPRUCE (RED/BLACK)	.10153E+04	.18444E+03	.12037E+04	0.	0.	0.	.10153E+04	.18444E+03	.12037E+04
FIR	.11602E+04	.25946E+03	.14314E+04	0.	0.	0.	.11602E+04	.25946E+03	.14314E+04
HEMLOCK	.17603E+02	.38127E+01	.21378E+02	0.	0.	0.	.17603E+02	.38127E+01	.21378E+02
WHITE PINE	.12583E+03	.30602E+02	.15592E+03	0.	0.	0.	.12583E+03	.30602E+02	.15592E+03
RED PINE	.11865E+01	.19322E+00	.13905E+01	0.	0.	0.	.11865E+01	.19322E+00	.13905E+01
LARCH	.10597E+02	.32059E+01	.22065E+02	0.	0.	0.	.10597E+02	.32059E+01	.22065E+02
JACK PINE	.58188E+01	.94560E+00	.68361E+01	0.	0.	0.	.58188E+01	.94560E+00	.68361E+01
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL SOFTWOOD	.24625E+04	.50209E+03	.29718E+04	0.	0.	0.	.24625E+04	.50209E+03	.29718E+04
SUGAR MAPLE	.10450E+04	.17300E+03	.12299E+04	0.	0.	0.	.10450E+04	.17300E+03	.12299E+04
RED MAPLE	.91752E+03	.17024E+03	.10928E+04	0.	0.	0.	.91752E+03	.17024E+03	.10928E+04
YELLOW BIRCH	.38523E+03	.62283E+02	.44799E+03	0.	0.	0.	.38523E+03	.62283E+02	.44799E+03
WHITE BIRCH	.77713E+03	.16724E+03	.94613E+03	0.	0.	0.	.77713E+03	.16724E+03	.94613E+03
OAK	.21619E+01	.36719E+00	.25592E+01	0.	0.	0.	.21619E+01	.36719E+00	.25592E+01
ASPEN	.21323E+03	.56695E+02	.27003E+03	0.	0.	0.	.21323E+03	.56695E+02	.27003E+03
GREY BIRCH	.44658E+03	.85077E+02	.53263E+03	0.	0.	0.	.44658E+03	.85077E+02	.53263E+03
ASH (WHITE/BLACK)	.47908E+02	.71967E+01	.55114E+02	0.	0.	0.	.47908E+02	.71967E+01	.55114E+02
BEECH	.23009E+03	.21536E+02	.25192E+03	0.	0.	0.	.23009E+03	.21536E+02	.25192E+03
OTHER HARDWOOD	.16005E+03	.18660E+02	.17879E+03	0.	0.	0.	.16005E+03	.18660E+02	.17879E+03
TOTAL HARDWOOD	.42249E+04	.76208E+03	.50070E+04	0.	0.	0.	.42249E+04	.76208E+03	.50070E+04
TOTAL ALL SPECIES	.66874E+04	.12642E+04	.79788E+04	0.	0.	0.	.66874E+04	.12642E+04	.79788E+04

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

TREES 3 - 9 CM DBH
KG/HA (DRY) - PART II

SPECIES	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
WHITE SPRUCE	0.	0.	.53199E+02	0.	.43167E+02	.96154E+02	.22894E+03
SPRUCE (RED/BLACK)	0.	0.	.62435E+03	0.	.53143E+03	.11490E+04	.24886E+04
FIR	0.	0.	.68936E+03	0.	.49145E+03	.11843E+04	.27550E+04
HEMLOCK	0.	0.	.83460E+01	0.	.48939E+01	.12410E+02	.35476E+02
WHITE PINE	0.	0.	.63535E+02	0.	.38481E+02	.10206E+03	.29895E+03
RED PINE	0.	0.	.23317E+00	0.	.16937E+00	.40424E+00	.18723E+01
LARCH	0.	0.	.42214E+01	0.	.10922E+01	.53390E+01	.29341E+02
JACK PINE	0.	0.	.15246E+01	0.	.82027E+00	.24014E+01	.10274E+02
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.
TOTAL SOFTWOOD	0.	0.	.14448E+04	0.	.11107E+04	.25521E+04	.58484E+04
SUGAR MAPLE	0.	0.	.19477E+03	0.	.46783E+02	.24141E+03	.14917E+04
RED MAPLE	0.	0.	.20804E+03	0.	.58586E+02	.26861E+03	.13749E+04
YELLOW BIRCH	0.	0.	.12618E+03	0.	.23919E+02	.15467E+03	.60925E+03
WHITE BIRCH	0.	0.	.16248E+03	0.	.63426E+02	.22451E+03	.11880E+04
OAK	0.	0.	.40320E+00	0.	.11155E+00	.51071E+00	.31195E+01
ASPEN	0.	0.	.45538E+02	0.	.15108E+02	.61790E+02	.33757E+03
GREY BIRCH	0.	0.	.90670E+02	0.	.26710E+02	.11921E+03	.66236E+03
ASH (WHITE/BLACK)	0.	0.	.12017E+02	0.	.26874E+01	.14704E+02	.69935E+02
BEECH	0.	0.	.65417E+02	0.	.14504E+02	.82981E+02	.34051E+03
OTHER HARDWOOD	0.	0.	.46675E+02	0.	.92488E+01	.57937E+02	.23989E+03
TOTAL HARDWOOD	0.	0.	.95219E+03	0.	.26108E+03	.12264E+04	.63173E+04
TOTAL ALL SPECIES	0.	0.	.23970E+04	0.	.13718E+04	.37785E+04	.12164E+05

TABLE A3

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

ERROR OF ESTIMATE PERCENT
3 - 9 CM DBH CLASS
DRY PART I

	STEM WOOD	STEM BARK	STEM TOTAL	STEM WOOD	STEM BARK	STEM TOTAL	STEM WOOD	STEM BARK	STEM TOTAL
SOFTWOOD									
211	10.85	11.40	10.92	0.00	0.00	0.00	10.85	11.40	10.92
911	17.22	18.10	17.34	0.00	0.00	0.00	17.22	18.10	17.34
HARDWOOD									
211	11.36	11.10	11.29	0.00	0.00	0.00	11.36	11.10	11.29
911	18.03	17.62	17.93	0.00	0.00	0.00	18.03	17.62	17.93
TOTAL									
211	7.72	7.73	7.70	0.00	0.00	0.00	7.72	7.73	7.70
911	12.24	12.28	12.22	0.00	0.00	0.00	12.24	12.28	12.22

150 PLOTS USED IN THIS SEARCH

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

ERROR OF ESTIMATE PERCENT
3 - 9 CM DBH CLASS
DRY PART II

	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
SOFTWOOD							
211	0.00	0.00	10.78	0.00	10.58	10.67	10.95
911	0.00	0.00	17.11	0.00	16.79	16.94	17.39
HARDWOOD							
211	0.00	0.00	11.44	0.00	11.55	11.42	11.29
911	0.00	0.00	18.20	0.00	18.33	18.14	17.93
TOTAL							
211	0.00	0.00	7.58	0.00	8.68	7.80	7.39
911	0.00	0.00	12.03	0.00	13.79	12.39	11.73

150 PLOTS USED IN THIS SEARCH

TABLE A4

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

TREES 3 - 9 CM DBH
KG/HA (FRESH) - PART I

SPECIES	TOTAL STEM WOOD	TOTAL STEM BARK	TOTAL STEM TOTAL	UNMERCHNTBLE STEM WOOD	UNMERCHNTBLE STEM BARK	UNMERCHNTBLE STEM TOTAL	MERCHNTBLE STEM WOOD	MERCHNTBLE STEM BARK	MERCHNTBLE STEM TOTAL
WHITE SPRUCE	.23981E+03	.46975E+02	.28758E+03	0.	0.	0.	.23981E+03	.46975E+02	.28758E+03
SPRUCE (RED/BLACK)	.28576E+04	.41571E+03	.24882E+04	0.	0.	0.	.28576E+04	.41571E+03	.24882E+04
FIR	.23985E+04	.10499E+03	.34611E+04	0.	0.	0.	.23985E+04	.10499E+03	.34611E+04
HEMLOCK	.37688E+02	.74061E+01	.45247E+02	0.	0.	0.	.37688E+02	.74061E+01	.45247E+02
WHITE PINE	.31210E+03	.63835E+02	.37758E+03	0.	0.	0.	.31210E+03	.63835E+02	.37758E+03
RED PINE	.24950E+01	.41287E+00	.29503E+01	0.	0.	0.	.24950E+01	.41287E+00	.29503E+01
LARCH	.36036E+02	.77605E+01	.44222E+02	0.	0.	0.	.36036E+02	.77605E+01	.44222E+02
JACK PINE	.12759E+02	.21148E+01	.15005E+02	0.	0.	0.	.12759E+02	.21148E+01	.15005E+02
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL SOFTWOOD	.50963E+04	.11293E+04	.67217E+04	0.	0.	0.	.50962E+04	.11292E+04	.67217E+04
SUGAR MAPLE	.16274E+04	.30971E+03	.19436E+04	0.	0.	0.	.16274E+04	.30971E+03	.19436E+04
RED MAPLE	.15139E+04	.33648E+03	.18558E+04	0.	0.	0.	.15139E+04	.33648E+03	.18558E+04
YELLOW BIRCH	.68868E+03	.11228E+03	.80196E+03	0.	0.	0.	.68868E+03	.11228E+03	.80196E+03
WHITE BIRCH	.13184E+04	.29006E+03	.16121E+04	0.	0.	0.	.13184E+04	.29006E+03	.16121E+04
OAK	.33625E+01	.67327E+00	.40497E+01	0.	0.	0.	.33625E+01	.67327E+00	.40497E+01
ASPEN	.39196E+03	.11776E+03	.51082E+03	0.	0.	0.	.39196E+03	.11776E+03	.51082E+03
GREY BIRCH	.77177E+03	.14334E+03	.92016E+03	0.	0.	0.	.77177E+03	.14334E+03	.92016E+03
ASH (WHITE/BLACK)	.69202E+02	.13459E+02	.83360E+02	0.	0.	0.	.69202E+02	.13459E+02	.83360E+02
BEECH	.38917E+03	.39777E+02	.43025E+03	0.	0.	0.	.38917E+03	.39777E+02	.43025E+03
OTHER HARDWOOD	.27338E+03	.33470E+02	.30763E+03	0.	0.	0.	.27338E+03	.33470E+02	.30763E+03
TOTAL HARDWOOD	.70463E+04	.13970E+04	.84696E+04	0.	0.	0.	.70463E+04	.13970E+04	.84696E+04
TOTAL ALL SPECIES	.12143E+05	.25262E+04	.15191E+05	0.	0.	0.	.12143E+05	.25262E+04	.15191E+05

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

TREES 3 - 9 CM DBH
KG/HA (FRESH) - PART II

SPECIES	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
WHITE SPRUCE	0.	0.	0.	0.	0.	.22186E+03	.51881E+03
SPRUCE (RED/BLACK)	0.	0.	0.	0.	0.	.23179E+04	.50359E+04
FIR	0.	0.	0.	0.	0.	.25394E+04	.62726E+04
HEMLOCK	0.	0.	0.	0.	0.	.24325E+02	.72420E+02
WHITE PINE	0.	0.	0.	0.	0.	.21817E+03	.66621E+03
RED PINE	0.	0.	0.	0.	0.	.90505E+00	.40239E+01
LARCH	0.	0.	0.	0.	0.	.11874E+02	.59403E+02
JACK PINE	0.	0.	0.	0.	0.	.53618E+01	.21474E+02
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.
TOTAL SOFTWOOD	0.	0.	0.	0.	0.	.53399E+04	.12651E+05
SUGAR MAPLE	0.	0.	0.	0.	0.	.49015E+03	.24949E+04
RED MAPLE	0.	0.	0.	0.	0.	.51548E+03	.24184E+04
YELLOW BIRCH	0.	0.	0.	0.	0.	.32055E+03	.11322E+04
WHITE BIRCH	0.	0.	0.	0.	0.	.44952E+03	.20955E+04
OAK	0.	0.	0.	0.	0.	.10561E+01	.52490E+01
ASPEN	0.	0.	0.	0.	0.	.13781E+03	.65702E+03
GREY BIRCH	0.	0.	0.	0.	0.	.22569E+03	.11578E+04
ASH (WHITE/BLACK)	0.	0.	0.	0.	0.	.28881E+02	.11442E+03
BEECH	0.	0.	0.	0.	0.	.16775E+03	.61301E+03
OTHER HARDWOOD	0.	0.	0.	0.	0.	.11726E+03	.43272E+03
TOTAL HARDWOOD	0.	0.	0.	0.	0.	.24542E+04	.11121E+05
TOTAL ALL SPECIES	0.	0.	0.	0.	0.	.77940E+04	.23772E+05

TABLE A5

RUN DATE 02/06/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

ERROR OF ESTIMATE PERCENT

3 - 9 CM DBH CLASS
FRESH PART I

	TOTAL STEM WOOD	TOTAL STEM BARK	TOTAL STEM TOTAL	UNMERCHNTBLE STEM WOOD	UNMERCHNTBLE STEM BARK	UNMERCHNTBLE STEM TOTAL	MERCHNTBLE STEM WOOD	MERCHNTBLE STEM BARK	MERCHNTBLE STEM TOTAL
SOFTWOOD									
2:1	11.36	11.10	11.14	0.00	0.00	0.00	11.36	11.10	11.14
9:1	18.02	17.76	17.68	0.00	0.00	0.00	18.02	17.76	17.68
HARDWOOD									
2:1	11.24	11.00	11.18	0.00	0.00	0.00	11.24	11.00	11.18
9:1	17.85	17.60	17.75	0.00	0.00	0.00	17.85	17.60	17.75
TOTAL									
2:1	7.59	7.56	7.58	0.00	0.00	0.00	7.59	7.56	7.58
9:1	12.06	12.01	11.91	0.00	0.00	0.00	12.06	12.01	11.91

150 PLOTS USED IN THIS SEARCH

RUN DATE 02/06/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

ERROR OF ESTIMATE PERCENT

3 - 9 CM DBH CLASS
FRESH PART II

	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
SOFTWOOD							
2:1	0.00	0.00	0.00	0.00	0.00	10.67	11.03
9:1	0.00	0.00	0.00	0.00	0.00	16.94	17.51
HARDWOOD							
2:1	0.00	0.00	0.00	0.00	0.00	11.52	11.25
9:1	0.00	0.00	0.00	0.00	0.00	18.29	17.86
TOTAL							
2:1	0.00	0.00	0.00	0.00	0.00	7.84	7.44
9:1	0.00	0.00	0.00	0.00	0.00	12.48	11.82

150 PLOTS USED IN THIS SEARCH

TABLE A6

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

TREES 10.0 + CM DBH
KG/HA (DRY) - PART I

SPECIES	TOTAL STEM WOOD	TOTAL STEM BARK	TOTAL STEM TOTAL	UNMERCHNTBLE STEM WOOD	UNMERCHNTBLE STEM BARK	UNMERCHNTBLE STEM TOTAL	MERCHNTBLE STEM WOOD	MERCHNTBLE STEM BARK	MERCHNTBLE STEM TOTAL
WHITE SPRUCE	.18987E+04	.21082E+03	.20997E+04	0.	0.	0.	.18987E+04	.21082E+03	.20997E+04
SPRUCE (RED/BLACK)	.15138E+05	.18989E+04	.17018E+05	0.	0.	0.	.15138E+05	.18989E+04	.17018E+05
FIR	.84618E+04	.96801E+03	.94349E+04	0.	0.	0.	.84618E+04	.96801E+03	.94349E+04
HEMLOCK	.85846E+03	.17329E+03	.10309E+04	0.	0.	0.	.85846E+03	.17329E+03	.10309E+04
WHITE PINE	.94261E+02	.11993E+02	.10780E+03	0.	0.	0.	.94261E+02	.11993E+02	.10780E+03
RED PINE	.14995E+03	.15102E+02	.16440E+03	0.	0.	0.	.14995E+03	.15102E+02	.16440E+03
LARCH	.39954E+03	.41260E+02	.43980E+03	0.	0.	0.	.39954E+03	.41260E+02	.43980E+03
JACK PINE	.73793E+03	.64962E+02	.80510E+03	0.	0.	0.	.73793E+03	.64962E+02	.80510E+03
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL SOFTWOOD	.24739E+05	.33776E+04	.28093E+05	0.	0.	0.	.24739E+05	.33776E+04	.28093E+05
SUGAR MAPLE	.33048E+04	.53487E+03	.38801E+04	0.	0.	0.	.33048E+04	.53487E+03	.38801E+04
RED MAPLE	.53353E+04	.77065E+03	.60971E+04	0.	0.	0.	.53353E+04	.77065E+03	.60971E+04
YELLOW BIRCH	.20890E+04	.23824E+03	.23189E+04	0.	0.	0.	.20890E+04	.23824E+03	.23189E+04
WHITE BIRCH	.23767E+04	.40453E+03	.27929E+04	0.	0.	0.	.23767E+04	.40453E+03	.27929E+04
OAK	0.	0.	0.	0.	0.	0.	0.	0.	0.
ASPEN	.18448E+04	.42764E+03	.22668E+04	0.	0.	0.	.18448E+04	.42764E+03	.22668E+04
GREY BIRCH	.28587E+03	.46820E+02	.33187E+03	0.	0.	0.	.28587E+03	.46820E+02	.33187E+03
ASH (WHITE/BLACK)	.55202E+03	.55270E+02	.60527E+03	0.	0.	0.	.55202E+03	.55270E+02	.60527E+03
BEECH	.70483E+03	.81478E+02	.78016E+03	0.	0.	0.	.70483E+03	.81478E+02	.78016E+03
OTHER HARDWOOD	.71990E+02	.88719E+01	.80969E+02	0.	0.	0.	.71990E+02	.88719E+01	.80969E+02
TOTAL HARDWOOD	.16565E+05	.25684E+04	.19154E+05	0.	0.	0.	.16565E+05	.25684E+04	.19154E+05
TOTAL ALL SPECIES	.41303E+05	.59460E+04	.47247E+05	0.	0.	0.	.41303E+05	.59460E+04	.47247E+05

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

TREES 10.0 + CM DBH
KG/HA (DRY) - PART II

SPECIES	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
WHITE SPRUCE	0.	0.	.56279E+03	0.	.33141E+03	.89075E+03	.30171E+04
SPRUCE (RED/BLACK)	0.	0.	.57096E+04	0.	.34891E+04	.92468E+04	.26975E+05
FIR	0.	0.	.17462E+04	0.	.11861E+04	.29813E+04	.10337E+05
HEMLOCK	0.	0.	.44512E+03	0.	.14191E+03	.58108E+03	.16332E+04
WHITE PINE	0.	0.	.17323E+02	0.	.73202E+01	.24755E+02	.15512E+03
RED PINE	0.	0.	.76248E+02	0.	.25719E+02	.99362E+02	.24330E+03
LARCH	0.	0.	.62114E+02	0.	.12309E+02	.74689E+02	.53205E+03
JACK PINE	0.	0.	.15056E+03	0.	.81406E+02	.21383E+03	.10808E+04
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.
TOTAL SOFTWOOD	0.	0.	.87699E+04	0.	.51953E+04	.14012E+05	.43973E+05
SUGAR MAPLE	0.	0.	.84354E+03	0.	.93942E+02	.92959E+03	.51398E+04
RED MAPLE	0.	0.	.15341E+04	0.	.17448E+03	.17044E+04	.78729E+04
YELLOW BIRCH	0.	0.	.22924E+04	0.	.63687E+02	.18853E+04	.44536E+04
WHITE BIRCH	0.	0.	.52803E+03	0.	.10412E+03	.63378E+03	.34699E+04
OAK	0.	0.	0.	0.	0.	0.	0.
ASPEN	0.	0.	.43046E+03	0.	.61167E+02	.50801E+03	.27937E+04
GREY BIRCH	0.	0.	.54130E+02	0.	.13623E+02	.79788E+02	.41018E+03
ASH (WHITE/BLACK)	0.	0.	.41803E+03	0.	.19094E+02	.48897E+03	.95259E+03
BEECH	0.	0.	.33001E+03	0.	.31880E+02	.67399E+03	.12794E+04
OTHER HARDWOOD	0.	0.	.81772E+02	0.	.35025E+01	.75713E+02	.15308E+03
TOTAL HARDWOOD	0.	0.	.65134E+04	0.	.56550E+03	.68876E+04	.26524E+05
TOTAL ALL SPECIES	0.	0.	.15283E+05	0.	.57608E+04	.20900E+05	.70498E+05

TABLE A7

RUN DATE 02/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

ERROR OF ESTIMATE PERCENT
10 CM + DBH CLASS
DRY PART I

	STEM WOOD	STEM BARK	STEM TOTAL	STEM WOOD	STEM BARK	STEM TOTAL	STEM WOOD	STEM BARK	STEM TOTAL
SOFTWOOD									
2!1	7.87	7.65	7.81	0.00	0.00	0.00	7.87	7.65	7.81
9!1	12.50	12.15	12.40	0.00	0.00	0.00	12.50	12.15	12.40
HARDWOOD									
2!1	10.44	10.19	10.39	0.00	0.00	0.00	10.44	10.19	10.39
9!1	16.58	16.18	16.50	0.00	0.00	0.00	16.58	16.18	16.50
TOTAL									
2!1	5.40	5.30	5.36	0.00	0.00	0.00	5.40	5.30	5.36
9!1	8.57	8.41	8.50	0.00	0.00	0.00	8.57	8.41	8.50

150 PLOTS USED IN THIS SEARCH

RUN DATE 02/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

ERROR OF ESTIMATE PERCENT
10 CM + DBH CLASS
DRY PART II

	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
SOFTWOOD							
2!1	0.00	0.00	7.13	0.00	6.85	6.98	7.30
9!1	0.00	0.00	11.31	0.00	10.88	11.09	11.59
HARDWOOD							
2!1	0.00	0.00	13.32	0.00	9.65	11.72	10.33
9!1	0.00	0.00	21.15	0.00	15.32	18.66	16.40
TOTAL							
2!1	0.00	0.00	6.67	0.00	5.94	5.40	5.88
9!1	0.00	0.00	10.27	0.00	9.43	8.58	8.07

150 PLOTS USED IN THIS SEARCH

TABLE A8

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

TREES 10.0 + CM DBH
KG/HA (FRESH) - PART I

SPECIES	TOTAL STEM WOOD	TOTAL STEM BARK	TOTAL STEM TOTAL	UNMERCHNTBLE STEM WOOD	UNMERCHNTBLE STEM BARK	UNMERCHNTBLE STEM TOTAL	MERCHNTBLE STEM WOOD	MERCHNTBLE STEM BARK	MERCHNTBLE STEM TOTAL
WHITE SPRUCE	.41889E+04	.50960E+03	.46709E+04	0.	0.	0.	.41889E+04	.50960E+03	.46709E+04
SPRUCE (RED/BLACK)	.29426E+05	.39989E+04	.33336E+05	0.	0.	0.	.29426E+05	.39989E+04	.33336E+05
FIR	.11939E+05	.20469E+04	.13902E+05	0.	0.	0.	.11939E+05	.20469E+04	.13902E+05
HEMLOCK	.21617E+04	.29479E+03	.24508E+04	0.	0.	0.	.21617E+04	.29479E+03	.24508E+04
WHITE PINE	.22857E+03	.31126E+02	.25434E+03	0.	0.	0.	.22857E+03	.31126E+02	.25434E+03
RED PINE	.39916E+03	.29305E+02	.42260E+03	0.	0.	0.	.39916E+03	.29305E+02	.42260E+03
LARCH	.74199E+03	.92387E+02	.83261E+03	0.	0.	0.	.74199E+03	.92387E+02	.83261E+03
JACK PINE	.15788E+04	.14153E+03	.17234E+04	0.	0.	0.	.15788E+04	.14153E+03	.17234E+04
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL SOFTWOOD	.50656E+05	.71379E+04	.57672E+05	0.	0.	0.	.50656E+05	.71379E+04	.57672E+05
SUGAR MAPLE	.52562E+04	.88426E+03	.61607E+04	0.	0.	0.	.52562E+04	.88426E+03	.61607E+04
RED MAPLE	.86202E+04	.14115E+04	.10023E+05	0.	0.	0.	.86202E+04	.14115E+04	.10023E+05
YELLOW BIRCH	.35923E+04	.42796E+03	.40125E+04	0.	0.	0.	.35923E+04	.42796E+03	.40125E+04
WHITE BIRCH	.40658E+04	.68296E+03	.47631E+04	0.	0.	0.	.40658E+04	.68296E+03	.47631E+04
OAK	0.	0.	0.	0.	0.	0.	0.	0.	0.
ASPEN	.34102E+04	.79231E+03	.41968E+04	0.	0.	0.	.34102E+04	.79231E+03	.41968E+04
GREY BIRCH	.51612E+03	.77473E+02	.59513E+03	0.	0.	0.	.51612E+03	.77473E+02	.59513E+03
ASH (WHITE/BLACK)	.77256E+03	.94955E+02	.86664E+03	0.	0.	0.	.77256E+03	.94955E+02	.86664E+03
BEECH	.11610E+04	.14517E+03	.12956E+04	0.	0.	0.	.11610E+04	.14517E+03	.12956E+04
OTHER HARDWOOD	.12257E+03	.16300E+02	.13881E+03	0.	0.	0.	.12257E+03	.16300E+02	.13881E+03
TOTAL HARDWOOD	.27517E+05	.45329E+04	.32852E+05	0.	0.	0.	.27517E+05	.45329E+04	.32852E+05
TOTAL ALL SPECIES	.78173E+05	.11671E+05	.89724E+05	0.	0.	0.	.78173E+05	.11671E+05	.89724E+05

RUN DATE 82/08/19. PERMANENT SAMPLE PLOT REQUEST NUMBER 1
PSP BIOMASS INVENTORY

TREES 10.0 + CM DBH
KG/HA (FRESH) - PART II

SPECIES	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
WHITE SPRUCE	0.	0.	0.	0.	0.	.19933E+04	.66823E+04
SPRUCE (RED/BLACK)	0.	0.	0.	0.	0.	.19108E+05	.52825E+05
FIR	0.	0.	0.	0.	0.	.64432E+04	.22939E+05
HEMLOCK	0.	0.	0.	0.	0.	.11146E+04	.34637E+04
WHITE PINE	0.	0.	0.	0.	0.	.52622E+02	.33133E+03
RED PINE	0.	0.	0.	0.	0.	.23478E+03	.63476E+03
LARCH	0.	0.	0.	0.	0.	.17000E+03	.10305E+04
JACK PINE	0.	0.	0.	0.	0.	.66203E+03	.23365E+04
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.
TOTAL SOFTWOOD	0.	0.	0.	0.	0.	.29779E+05	.90243E+05
SUGAR MAPLE	0.	0.	0.	0.	0.	.27402E+04	.85412E+04
RED MAPLE	0.	0.	0.	0.	0.	.37632E+04	.13803E+05
YELLOW BIRCH	0.	0.	0.	0.	0.	.33938E+04	.75248E+04
WHITE BIRCH	0.	0.	0.	0.	0.	.12657E+04	.61010E+04
OAK	0.	0.	0.	0.	0.	0.	0.
ASPEN	0.	0.	0.	0.	0.	.10815E+04	.53270E+04
GREY BIRCH	0.	0.	0.	0.	0.	.16466E+03	.77505E+03
ASH (WHITE/BLACK)	0.	0.	0.	0.	0.	.62643E+03	.13414E+04
BEECH	0.	0.	0.	0.	0.	.12362E+04	.26206E+04
OTHER HARDWOOD	0.	0.	0.	0.	0.	.14939E+03	.27670E+03
TOTAL HARDWOOD	0.	0.	0.	0.	0.	.14421E+05	.46311E+05
TOTAL ALL SPECIES	0.	0.	0.	0.	0.	.44200E+05	.13655E+06

TABLE A9

RUN DATE 02/08/19. P E R M A N E N T S A M P L E P L O T REQUEST NUMBER 1
PSP BIOMASS INVENTORY

ERROR OF ESTIMATE PERCENT
10 CM + DBH CLASS
FRESH PART I

	TOTAL STEM WOOD	TOTAL STEM BARK	TOTAL STEM TOTAL	UNMERCHNTBLE STEM WOOD	UNMERCHNTBLE STEM BARK	UNMERCHNTBLE STEM TOTAL	MERCHNTBLE STEM WOOD	MERCHNTBLE STEM BARK	MERCHNTBLE STEM TOTAL
SOFTWOOD									
211	7.88	7.41	7.72	0.00	0.00	0.00	7.88	7.41	7.72
911	12.39	11.76	12.27	0.00	0.00	0.00	12.39	11.76	12.27
HARDWOOD									
211	10.34	10.03	10.27	0.00	0.00	0.00	10.34	10.03	10.27
911	16.42	15.93	16.31	0.00	0.00	0.00	16.42	15.93	16.31
TOTAL									
211	5.40	5.12	5.34	0.00	0.00	0.00	5.40	5.12	5.34
911	8.58	8.13	8.48	0.00	0.00	0.00	8.58	8.13	8.48

150 PLOTS USED IN THIS SEARCH

RUN DATE 02/08/19. P E R M A N E N T S A M P L E P L O T REQUEST NUMBER 1
PSP BIOMASS INVENTORY

ERROR OF ESTIMATE PERCENT
10 CM + DBH CLASS
FRESH PART II

	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
SOFTWOOD							
211	0.00	0.00	0.00	0.00	0.00	6.89	7.22
911	0.00	0.00	0.00	0.00	0.00	10.93	11.46
HARDWOOD							
211	0.00	0.00	0.00	0.00	0.00	11.20	10.19
911	0.00	0.00	0.00	0.00	0.00	17.79	16.17
TOTAL							
211	0.00	0.00	0.00	0.00	0.00	5.09	5.02
911	0.00	0.00	0.00	0.00	0.00	8.07	7.96

150 PLOTS USED IN THIS SEARCH

APPENDIX B

M.S.S. Estimates

Pictou County

TABLE B1

RUN DATE 82/10/07. MULTISTAGE BIOMASS INVENTORY REQUEST NUMBER 0

SEARCH ON

COUNTY	01	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
OWNERSHIP		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
COVER		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MATURITY		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
STAND		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

346 DATA RECORDS USED IN THIS SEARCH

TABLE B2

RUN DATE 82/10/07. MULTISTAGE BIOMASS INVENTORY REQUEST NUMBER 0

PRODUCTS BY ALL MATURITY CLASS,BY ALL STAND TYPE,BY ALL OWNERSHIP,BY ALL COVER TYPE,

PICTOU COUNTY

TREES ≥ 9 CM DBH
KG (DRY) - PART I

SPECIES	TOTAL WOOD	TOTAL BARK	TOTAL TOTAL	MERCHANTABLE WOOD	MERCHANTABLE BARK	MERCHANTABLE TOTAL	UNMERCHANTABLE WOOD	UNMERCHANTABLE BARK	UNMERCHANTABLE TOTAL
WHITE SPRUCE	.13251E+09	.24064E+08	.15747E+09	0.	0.	0.	.13251E+09	.24064E+08	.15747E+09
SPRUCE (RED/BLACK)	.61693E+08	.10999E+08	.72943E+08	0.	0.	0.	.61693E+08	.10999E+08	.72943E+08
FIR	.14705E+09	.31991E+08	.17945E+09	0.	0.	0.	.14705E+09	.31991E+08	.17945E+09
HEMLOCK	.31717E+07	.69700E+06	.38615E+07	0.	0.	0.	.31717E+07	.69700E+06	.38615E+07
WHITE PINE	.40212E+06	.87395E+05	.49046E+06	0.	0.	0.	.40212E+06	.87395E+05	.49046E+06
RED PINE	0.	0.	0.	0.	0.	0.	0.	0.	0.
LARCH	0.	0.	0.	0.	0.	0.	0.	0.	0.
JACK PINE	0.	0.	0.	0.	0.	0.	0.	0.	0.
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUGAR MAPLE	.12617E+09	.20911E+08	.14854E+09	0.	0.	0.	.12617E+09	.20911E+08	.14854E+09
RED MAPLE	.10646E+09	.18995E+08	.12594E+09	0.	0.	0.	.10646E+09	.18995E+08	.12594E+09
YELLOW BIRCH	.11318E+08	.18274E+07	.13160E+08	0.	0.	0.	.11318E+08	.18274E+07	.13160E+08
WHITE BIRCH	.26666E+08	.56252E+07	.32358E+08	0.	0.	0.	.26666E+08	.56252E+07	.32358E+08
OAK	0.	0.	0.	0.	0.	0.	0.	0.	0.
ASPEN	.26344E+08	.71699E+07	.33527E+08	0.	0.	0.	.26344E+08	.71699E+07	.33527E+08
GREY BIRCH	.42343E+08	.82290E+07	.50668E+08	0.	0.	0.	.42343E+08	.82290E+07	.50668E+08
ASH(WHITE/BLACK)	.50799E+07	.71088E+06	.57956E+07	0.	0.	0.	.50799E+07	.71088E+06	.57956E+07
BEECH	.17240E+08	.16035E+07	.18865E+08	0.	0.	0.	.17240E+08	.16035E+07	.18865E+08
OTHER HARDWOOD	.36569E+08	.32319E+07	.39856E+08	0.	0.	0.	.36569E+08	.32319E+07	.39856E+08
TOTAL SOFTWOOD	.34483E+09	.67838E+08	.41422E+09	0.	0.	0.	.34483E+09	.67838E+08	.41422E+09
TOTAL HARDWOOD	.39819E+09	.68304E+08	.46870E+09	0.	0.	0.	.39819E+09	.68304E+08	.46870E+09
GRAND TOTAL	.74302E+09	.13614E+09	.88292E+09	0.	0.	0.	.74302E+09	.13614E+09	.88292E+09

RUN DATE 82/10/07. MULTISTAGE BIOMASS INVENTORY REQUEST NUMBER 0

PRODUCTS BY ALL MATURITY CLASS,BY ALL STAND TYPE,BY ALL OWNERSHIP,BY ALL COVER TYPE,

PICTOU COUNTY

TREES ≥ 9 CM DBH
KG (DRY) - PART II

SPECIES	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
WHITE SPRUCE	0.	0.	.66233E+08	0.	.54651E+08	.12052E+09	.28197E+09
SPRUCE (RED/BLACK)	0.	0.	.36673E+08	0.	.30789E+08	.67131E+08	.14837E+09
FIR	0.	0.	.80872E+08	0.	.57012E+08	.13840E+09	.33561E+09
HEMLOCK	0.	0.	.16070E+07	0.	.81287E+06	.24129E+07	.65987E+07
WHITE PINE	0.	0.	.15777E+06	0.	.88333E+05	.24716E+06	.84508E+06
RED PINE	0.	0.	0.	0.	0.	0.	0.
LARCH	0.	0.	0.	0.	0.	0.	0.
JACK PINE	0.	0.	0.	0.	0.	0.	0.
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.
SUGAR MAPLE	0.	0.	.23517E+08	0.	.56715E+07	.29177E+08	.18020E+09
RED MAPLE	0.	0.	.24027E+08	0.	.59931E+07	.30411E+08	.15801E+09
YELLOW BIRCH	0.	0.	.37041E+07	0.	.69898E+06	.45363E+07	.17886E+08
WHITE BIRCH	0.	0.	.55831E+07	0.	.20723E+07	.76175E+07	.40520E+08
OAK	0.	0.	0.	0.	0.	0.	0.
ASPEN	0.	0.	.55587E+07	0.	.20989E+07	.77289E+07	.42077E+08
GREY BIRCH	0.	0.	.87830E+07	0.	.37847E+07	.11687E+08	.63444E+08
ASH(WHITE/BLACK)	0.	0.	.11940E+07	0.	.22501E+06	.14334E+07	.72496E+07
BEECH	0.	0.	.49141E+07	0.	.10622E+07	.62048E+07	.25478E+08
OTHER HARDWOOD	0.	0.	.10641E+08	0.	.18418E+07	.12951E+08	.53414E+08
TOTAL SOFTWOOD	0.	0.	.18554E+09	0.	.14335E+09	.32872E+09	.77340E+09
TOTAL HARDWOOD	0.	0.	.87923E+08	0.	.22368E+08	.11172E+09	.58828E+09
GRAND TOTAL	0.	0.	.27347E+09	0.	.16573E+09	.44044E+09	.13617E+10

TABLE B3

RUN DATE 82/10/07. MULTISTAGE BIOMASS INVENTORY REQUEST NUMBER 0

PRODUCTS BY ALL MATURITY CLASS,BY ALL STAND TYPE,BY ALL OWNERSHIP,BY ALL COVER TYPE,

PICTOU COUNTY

TREES 2 - 9 CM DBH
KG (FRESH) - PART I

SPECIES	TOTAL STEM WOOD	TOTAL STEM BARK	TOTAL STEM TOTAL	UNMERCHNIBLE STEM WOOD	UNMERCHNIBLE STEM BARK	UNMERCHNIBLE STEM TOTAL	MERCHNIBLE STEM WOOD	MERCHNIBLE STEM BARK	MERCHNIBLE STEM TOTAL
WHITE SPRUCE	.29055E+09	.58411E+08	.35067E+09	0.	0.	0.	.29055E+09	.58411E+08	.35067E+09
SPRUCE (RED/BLACK)	.12466E+09	.24706E+08	.15028E+09	0.	0.	0.	.12466E+09	.24706E+08	.15028E+09
FIR	.29553E+09	.71621E+08	.42982E+09	0.	0.	0.	.29553E+09	.71621E+08	.42982E+09
HEMLOCK	.67375E+07	.13722E+07	.81366E+07	0.	0.	0.	.67375E+07	.13722E+07	.81366E+07
WHITE PINE	.97273E+06	.17831E+06	.11577E+07	0.	0.	0.	.97273E+06	.17831E+06	.11577E+07
RED PINE	0.	0.	0.	0.	0.	0.	0.	0.	0.
LARCH	0.	0.	0.	0.	0.	0.	0.	0.	0.
JACK PINE	0.	0.	0.	0.	0.	0.	0.	0.	0.
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUGAR MAPLE	.19648E+09	.37472E+08	.23474E+09	0.	0.	0.	.19648E+09	.37472E+08	.23474E+09
RED MAPLE	.17507E+09	.37188E+08	.21306E+09	0.	0.	0.	.17507E+09	.37188E+08	.21306E+09
YELLOW BIRCH	.20223E+08	.32924E+07	.23545E+08	0.	0.	0.	.20223E+08	.32924E+07	.23545E+08
WHITE BIRCH	.45291E+08	.97305E+07	.55159E+08	0.	0.	0.	.45291E+08	.97305E+07	.55159E+08
OAK	0.	0.	0.	0.	0.	0.	0.	0.	0.
ASPEN	.48398E+08	.15159E+08	.63655E+08	0.	0.	0.	.48398E+08	.15159E+08	.63655E+08
GREY BIRCH	.72828E+08	.13916E+08	.87237E+08	0.	0.	0.	.72828E+08	.13916E+08	.87237E+08
ASH(WHITE/BLACK)	.73024E+07	.13157E+07	.86722E+07	0.	0.	0.	.73024E+07	.13157E+07	.86722E+07
BEECH	.29146E+08	.29583E+07	.32202E+08	0.	0.	0.	.29146E+08	.29583E+07	.32202E+08
OTHER HARDWOOD	.61624E+08	.59070E+07	.67729E+08	0.	0.	0.	.61624E+08	.59070E+07	.67729E+08
TOTAL SOFTWOOD	.71845E+09	.15629E+09	.94006E+09	0.	0.	0.	.71845E+09	.15629E+09	.94006E+09
TOTAL HARDWOOD	.65635E+09	.12694E+09	.78598E+09	0.	0.	0.	.65635E+09	.12694E+09	.78598E+09
GRAND TOTAL	.13748E+10	.28323E+09	.17260E+10	0.	0.	0.	.13748E+10	.28323E+09	.17260E+10

RUN DATE 82/10/07. MULTISTAGE BIOMASS INVENTORY REQUEST NUMBER 0

PRODUCTS BY ALL MATURITY CLASS,BY ALL STAND TYPE,BY ALL OWNERSHIP,BY ALL COVER TYPE,

PICTOU COUNTY

TREES 2 - 9 CM DBH
KG (FRESH) - PART II

SPECIES	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
WHITE SPRUCE	0.	0.	0.	0.	0.	.27854E+09	.63968E+09
SPRUCE (RED/BLACK)	0.	0.	0.	0.	0.	.13556E+09	.29977E+09
FIR	0.	0.	0.	0.	0.	.29796E+09	.76225E+09
HEMLOCK	0.	0.	0.	0.	0.	.47371E+07	.13420E+08
WHITE PINE	0.	0.	0.	0.	0.	.52771E+06	.18681E+07
RED PINE	0.	0.	0.	0.	0.	0.	0.
LARCH	0.	0.	0.	0.	0.	0.	0.
JACK PINE	0.	0.	0.	0.	0.	0.	0.
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.
SUGAR MAPLE	0.	0.	0.	0.	0.	.59284E+08	.30146E+09
RED MAPLE	0.	0.	0.	0.	0.	.59516E+08	.27765E+09
YELLOW BIRCH	0.	0.	0.	0.	0.	.93953E+07	.33218E+08
WHITE BIRCH	0.	0.	0.	0.	0.	.15249E+08	.71473E+08
OAK	0.	0.	0.	0.	0.	0.	0.
ASPEN	0.	0.	0.	0.	0.	.17320E+08	.82159E+08
GREY BIRCH	0.	0.	0.	0.	0.	.31811E+08	.11044E+09
ASH(WHITE/BLACK)	0.	0.	0.	0.	0.	.27158E+07	.11558E+08
BEECH	0.	0.	0.	0.	0.	.12518E+08	.45815E+08
OTHER HARDWOOD	0.	0.	0.	0.	0.	.25693E+08	.95258E+08
TOTAL SOFTWOOD	0.	0.	0.	0.	0.	.71732E+09	.17170E+10
TOTAL HARDWOOD	0.	0.	0.	0.	0.	.22358E+09	.10209E+10
GRAND TOTAL	0.	0.	0.	0.	0.	.94883E+09	.27460E+10

TABLE 3A

RUN DATE 82/10/07. MULTISTAGE BIOMASS INVENTORY REQUEST NUMBER 0

PRODUCTS BY ALL MATURITY CLASS,BY ALL STAND TYPE,BY ALL OWNERSHIP,BY ALL COVER TYPE,
PICTOU COUNTY

TREES >10 : CM DBH
KG (ONLY) - PART I

SPECIES	TOTAL STEM WOOD	TOTAL STEM BARK	TOTAL STEM TOTAL	MERCHANTABLE STEM WOOD	MERCHANTABLE STEM BARK	MERCHANTABLE STEM TOTAL	UNMERCHANTABLE STEM WOOD	UNMERCHANTABLE STEM BARK	UNMERCHANTABLE STEM TOTAL
WHITE SPRUCE	.16114E+10	.18821E+09	.17961E+10	0.	0.	0.	.16114E+10	.18821E+09	.17961E+10
SPRUCE (RED/BLACK)	.11661E+10	.15282E+09	.13184E+10	0.	0.	0.	.11661E+10	.15282E+09	.13184E+10
FIR	.14566E+10	.26528E+09	.17272E+10	0.	0.	0.	.14566E+10	.26528E+09	.17272E+10
HEMLOCK	.40027E+09	.76284E+08	.47582E+09	0.	0.	0.	.40027E+09	.76284E+08	.47582E+09
WHITE PINE	.66751E+08	.84056E+07	.74945E+08	0.	0.	0.	.66751E+08	.84056E+07	.74945E+08
RED PINE	.33110E+08	.34504E+07	.36424E+08	0.	0.	0.	.33110E+08	.34504E+07	.36424E+08
LARCH	.44232E+07	.44844E+06	.48605E+07	0.	0.	0.	.44232E+07	.44844E+06	.48605E+07
JACK PINE	.64818E+06	.42977E+05	.68266E+06	0.	0.	0.	.64818E+06	.42977E+05	.68266E+06
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUGAR MAPLE	.15168E+10	.21419E+09	.17224E+10	0.	0.	0.	.15168E+10	.21419E+09	.17224E+10
RED MAPLE	.12526E+10	.17491E+09	.14247E+10	0.	0.	0.	.12526E+10	.17491E+09	.14247E+10
YELLOW BIRCH	.85797E+09	.11396E+09	.97218E+09	0.	0.	0.	.85797E+09	.11396E+09	.97218E+09
WHITE BIRCH	.13747E+09	.22851E+08	.16065E+09	0.	0.	0.	.13747E+09	.22851E+08	.16065E+09
OAK	0.	0.	0.	0.	0.	0.	0.	0.	0.
ASPEN	.52202E+09	.11622E+09	.63660E+09	0.	0.	0.	.52202E+09	.11622E+09	.63660E+09
GREY BIRCH	.89666E+08	.14769E+08	.10434E+09	0.	0.	0.	.89666E+08	.14769E+08	.10434E+09
ASH(WHITE/BLACK)	.76849E+08	.82555E+07	.84954E+08	0.	0.	0.	.76849E+08	.82555E+07	.84954E+08
BEECH	.36662E+09	.26823E+08	.39338E+09	0.	0.	0.	.36662E+09	.26823E+08	.39338E+09
OTHER HARDWOOD	.64858E+08	.53892E+07	.70289E+08	0.	0.	0.	.64858E+08	.53892E+07	.70289E+08
TOTAL SOFTWOOD	.47392E+10	.69495E+09	.54344E+10	0.	0.	0.	.47392E+10	.69495E+09	.54344E+10
TOTAL HARDWOOD	.48848E+10	.69736E+09	.55694E+10	0.	0.	0.	.48848E+10	.69736E+09	.55694E+10
GRAND TOTAL	.96240E+10	.13923E+10	.11004E+11	0.	0.	0.	.96240E+10	.13923E+10	.11004E+11

RUN DATE 82/10/07. MULTISTAGE BIOMASS INVENTORY REQUEST NUMBER 0

PRODUCTS BY ALL MATURITY CLASS,BY ALL STAND TYPE,BY ALL OWNERSHIP,BY ALL COVER TYPE,
PICTOU COUNTY

TREES >10 : CM DBH
KG (ONLY) - PART II

SPECIES	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
WHITE SPRUCE	0.	0.	.50582E+09	0.	.30905E+09	.81292E+09	.26440E+10
SPRUCE (RED/BLACK)	0.	0.	.39789E+09	0.	.26652E+09	.66760E+09	.20534E+10
FIR	0.	0.	.43146E+09	0.	.27499E+09	.71344E+09	.25014E+10
HEMLOCK	0.	0.	.10275E+09	0.	.36720E+08	.13855E+09	.60669E+09
WHITE PINE	0.	0.	.86276E+07	0.	.36780E+07	.12352E+08	.77690E+08
RED PINE	0.	0.	.66761E+07	0.	.32187E+07	.98458E+07	.46800E+08
LARCH	0.	0.	.64577E+06	0.	.12917E+06	.77816E+06	.57353E+07
JACK PINE	0.	0.	.10356E+06	0.	.40998E+05	.14259E+06	.79811E+06
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.
SUGAR MAPLE	0.	0.	.28164E+09	0.	.27503E+08	.30515E+09	.20263E+10
RED MAPLE	0.	0.	.27431E+09	0.	.33898E+08	.30613E+09	.17473E+10
YELLOW BIRCH	0.	0.	.24918E+09	0.	.10163E+08	.26612E+09	.12181E+10
WHITE BIRCH	0.	0.	.29244E+08	0.	.53605E+07	.34440E+08	.19495E+09
OAK	0.	0.	0.	0.	0.	0.	0.
ASPEN	0.	0.	.12207E+09	0.	.14755E+08	.13771E+09	.77268E+09
GREY BIRCH	0.	0.	.18573E+08	0.	.33980E+07	.19163E+08	.12335E+09
ASH(WHITE/BLACK)	0.	0.	.14163E+08	0.	.14554E+07	.15551E+08	.10068E+09
BEECH	0.	0.	.11558E+09	0.	.93999E+07	.12213E+09	.51233E+09
OTHER HARDWOOD	0.	0.	.19345E+08	0.	.21602E+07	.21630E+08	.92017E+08
TOTAL SOFTWOOD	0.	0.	.14540E+10	0.	.89434E+09	.23556E+10	.79365E+10
TOTAL HARDWOOD	0.	0.	.11211E+10	0.	.11608E+09	.12280E+10	.67877E+10
GRAND TOTAL	0.	0.	.38781E+10	0.	.18184E+10	.38836E+10	.14734E+11

TABLE B5

RUN DATE 82/10/07. MULTISTAGE BIOMASS INVENTORY REQUEST NUMBER 0

PRODUCTS BY ALL MATURITY CLASS,BY ALL STAND TYPE,BY ALL OWNERSHIP,BY ALL COVER TYPE, PICTOU COUNTY

TREES 10.0+ - CM,UBH KG (FRESH) - PART I

SPECIES	TOTAL STEM WOOD	TOTAL STEM BARK	TOTAL STEM TOTAL	UNMERCHNTBLE STEM WOOD	UNMERCHNTBLE STEM BARK	UNMERCHNTBLE STEM TOTAL	MERCHNTBLE STEM WOOD	MERCHNTBLE STEM BARK	MERCHNTBLE STEM TOTAL
WHITE SPRUCE	.35465E+10	.45654E+09	.39960E+10	0.	0.	0.	.35465E+10	.45654E+09	.39960E+10
SPRUCE (RED/BLACK)	.22460E+10	.32447E+09	.25704E+10	0.	0.	0.	.22460E+10	.32447E+09	.25704E+10
FIR	.24358E+10	.55792E+09	.38003E+10	0.	0.	0.	.24358E+10	.55792E+09	.38003E+10
HEMLOCK	.91803E+09	.13129E+09	.10469E+10	0.	0.	0.	.91803E+09	.13129E+09	.10469E+10
WHITE PINE	.14178E+09	.15563E+08	.15563E+09	0.	0.	0.	.14178E+09	.15563E+08	.15563E+09
RED PINE	.78340E+08	.67260E+07	.84323E+08	0.	0.	0.	.78340E+08	.67260E+07	.84323E+08
LARCH	.82093E+07	.10000E+07	.90096E+07	0.	0.	0.	.82093E+07	.10000E+07	.90096E+07
JACK PINE	.13370E+07	.91975E+05	.14116E+07	0.	0.	0.	.13370E+07	.91975E+05	.14116E+07
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.	0.	0.
SUGAR MAPLE	.23810E+10	.33015E+09	.26992E+10	0.	0.	0.	.23810E+10	.33015E+09	.26992E+10
RED MAPLE	.20221E+10	.32349E+09	.23411E+10	0.	0.	0.	.20221E+10	.32349E+09	.23411E+10
YELLOW BIRCH	.14229E+10	.18856E+09	.16116E+10	0.	0.	0.	.14229E+10	.18856E+09	.16116E+10
WHITE BIRCH	.23676E+09	.38197E+08	.27534E+09	0.	0.	0.	.23676E+09	.38197E+08	.27534E+09
OAK	0.	0.	0.	0.	0.	0.	0.	0.	0.
ASPEN	.96360E+09	.21068E+09	.11716E+10	0.	0.	0.	.96360E+09	.21068E+09	.11716E+10
GREY BIRCH	.16070E+09	.24233E+08	.18505E+09	0.	0.	0.	.16070E+09	.24233E+08	.18505E+09
ASH(WHITE/BLACK)	.10846E+09	.14709E+08	.12207E+09	0.	0.	0.	.10846E+09	.14709E+08	.12207E+09
BEECH	.61004E+09	.47431E+08	.65736E+09	0.	0.	0.	.61004E+09	.47431E+08	.65736E+09
OTHER HARDWOOD	.10805E+09	.95540E+07	.11775E+09	0.	0.	0.	.10805E+09	.95540E+07	.11775E+09
TOTAL SOFTWOOD	.93760E+10	.14936E+10	.11664E+11	0.	0.	0.	.93760E+10	.14936E+10	.11664E+11
TOTAL HARDWOOD	.80135E+10	.11869E+10	.91811E+10	0.	0.	0.	.80135E+10	.11869E+10	.91811E+10
GRAND TOTAL	.17390E+11	.26805E+10	.20845E+11	0.	0.	0.	.17390E+11	.26805E+10	.20845E+11

RUN DATE 82/10/07. MULTISTAGE BIOMASS INVENTORY REQUEST NUMBER 0

PRODUCTS BY ALL MATURITY CLASS,BY ALL STAND TYPE,BY ALL OWNERSHIP,BY ALL COVER TYPE, PICTOU COUNTY

TREES 10.0+ - CM,UBH KG (FRESH) - PART II

SPECIES	STUMP WOOD	STUMP BARK	LIVE BRANCHES	DEAD BRANCHES	FOLIAGE	TOTAL LIVE CROWN	TOTAL ABOVE GROUND
WHITE SPRUCE	0.	0.	0.	0.	0.	.18256E+10	.58714E+10
SPRUCE (RED/BLACK)	0.	0.	0.	0.	0.	.13695E+10	.40431E+10
FIR	0.	0.	0.	0.	0.	.15919E+10	.55586E+10
HEMLOCK	0.	0.	0.	0.	0.	.26717E+09	.12818E+10
WHITE PINE	0.	0.	0.	0.	0.	.26260E+08	.16576E+09
RED PINE	0.	0.	0.	0.	0.	.22708E+08	.10770E+09
LARCH	0.	0.	0.	0.	0.	.17695E+07	.10964E+08
JACK PINE	0.	0.	0.	0.	0.	.33433E+06	.17251E+07
OTHER SOFTWOOD	0.	0.	0.	0.	0.	0.	0.
SUGAR MAPLE	0.	0.	0.	0.	0.	.55244E+09	.32631E+10
RED MAPLE	0.	0.	0.	0.	0.	.67796E+09	.30506E+10
YELLOW BIRCH	0.	0.	0.	0.	0.	.49344E+09	.20671E+10
WHITE BIRCH	0.	0.	0.	0.	0.	.68757E+08	.34383E+09
OAK	0.	0.	0.	0.	0.	0.	0.
ASPEN	0.	0.	0.	0.	0.	.29613E+09	.14676E+10
GREY BIRCH	0.	0.	0.	0.	0.	.38419E+08	.22326E+09
ASH(WHITE/BLACK)	0.	0.	0.	0.	0.	.26349E+08	.14572E+09
BEECH	0.	0.	0.	0.	0.	.22774E+09	.88546E+09
OTHER HARDWOOD	0.	0.	0.	0.	0.	.41320E+08	.16041E+09
TOTAL SOFTWOOD	0.	0.	0.	0.	0.	.51052E+10	.17041E+11
TOTAL HARDWOOD	0.	0.	0.	0.	0.	.24235E+10	.11606E+11
GRAND TOTAL	0.	0.	0.	0.	0.	.75287E+10	.28647E+11

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